

Septicemia

Summary of Methods and Data for Estimate of Costs of Illness

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|--|-----------------|
| 1. Estimated Total Economic Cost | \$ 7.2 billion |
| Estimated Direct Cost | \$ 4.9 billion |
| Estimated Indirect Cost | \$ 2.3 billion |
| Reference Year | 1998 |
| IC Providing the Estimate | NHLBI |
| | |
| Direct Costs Include: Other related nonhealth costs | No |
| Indirect Costs Include: | |
| Mortality costs | Yes |
| Morbidity costs: Lost workdays of the patient | No |
| Morbidity costs: Reduced productivity of the patient | No |
| Lost earnings of unpaid care givers | No |
| Other related nonhealth costs | No |
| Interest Rate Used to Discount Out-Year Costs | 6 % |
| 2. Category code(s) from the International Classification of Diseases, 9th Revision, Clinical Modification, (ICD-9-CM) for all diseases whose costs are included in this estimate: <u>038(2)</u> . | |
| 3. Estimate Includes Costs: | |
| Of related conditions beyond primary, strictly coded ICD-9-CM category | No |
| Attributable to the subject disease as a secondary diagnosis | No |
| Of conditions for which the subject disease is an underlying cause | No |
| 4. Population Base for Cost Estimate (Total U.S. pop or other) | Total U.S. pop. |
| 5. Annual (prevalence model) or Lifetime (incidence model) Cost: | Annual |
| 6. Perspective of Cost Estimate (Total society, Federal budget, or Other) | Total Society |
| 7. Approach to Estimation of Indirect Costs | Human Capital |
| | |
| 8. <u>Source of Cost Estimate:</u> | |
| Unpublished. Contact Mr. Thomas Thom, NHLBI, 301-435-0710. | |
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| 9. <u>Other Indicators of Burden of Disease:</u> | |

In 1996, septicemia was the 12th leading cause of death causing over 20,000 deaths. It is a contributing cause to about 80,000 additional deaths.

10. Commentary:

Direct costs by type of cost for total infectious diseases in 1995 were estimated by Tom Hodgson (National Center for Health Statistics) in a report to be published. He used a variety of survey data from NCHS and the Health Care Financing Administration, and elsewhere. Septicemia costs for 1995 are estimated by applying to Hodgson's total infectious disease costs (hospital only) the proportion that septicemia is of total infectious disease diagnoses for hospital days reported in the latest NCHS survey. From the NCHS publication "Health, US 1996-97", total personal health expenditures increased 19% from \$740.5 billion in 1992 to \$878.8 billion in 1995. Septicemia costs for 1995 were increased by that same percentage to estimate the cost in

1998. Only the primary diagnosis of septicemia reported in the survey is considered. Allocating costs according to the primary diagnosis eliminated overlap with other diseases. Costs associated with septicemia as a comorbid condition to some other primary diagnosis were not included. Costs incurred by family or other personal caregivers for septicemia patients cannot be estimated and were not included. The national health expenditures that cannot be allocated to diseases (e.g. construction and research) were not included in the septicemia direct costs.

Indirect morbidity cost of septicemia could not be estimated. The indirect mortality cost in 1998 represents lost productivity based on lost earnings attributed to premature deaths from septicemia in that year. It was estimated by applying the numbers of septicemia deaths in 1996, by age and sex, reported from national vital statistics, to the age-sex estimates of the present value of lifetime earnings discounted at six percent. These lifetime values were estimated for 1992 by Dr. Dorothy Rice (University of California, San Francisco). They are not published. Those values were inflated to 1998 using an inflation factor based on mean annual wages of year-round full time workers reported by the Bureau of the Census and extrapolated to 1998. Septicemia deaths in 1996 were those where septicemia was the underlying cause of death regardless of what other contributing causes may have been present. Other deaths, where septicemia was a contributing cause, were not included. The accuracy of estimates of the present value of lifetime earnings has not been assessed by anyone at NHLBI; estimates were taken at face value.